

REMARKS

This is in response to the Office Action dated June 6, 2005.

The drawings and title have been amended as suggested by the Examiner. Thus, it is requested that the formality objections to the drawings and title be withdrawn.

Claim 10 has also been amended as suggested by the Examiner. Thus, it is respectfully requested that the formality objection to claim 10 be withdrawn.

Claim 1 stands rejected under 35 U.S.C. Section 102(b) as being allegedly anticipated by Shimizu (US 2002/0043723). This Section 102(b) rejection is respectfully traversed for at least the following reasons.

Note that Shimizu is discussed in the background section of the instant specification. E.g., see pages 7+ of the instant specification. Problems with Shimizu are identified and discussed in the background section of the instant application.

Claim 1 as amended requires that no organic insulating film is provided between the other wirings and the bonding pad. For example and without limitation, Fig. 6 of the instant application illustrates a second wiring layer (2) that includes a plurality of wirings formed in a region under bonding pad (1). A predetermined wiring (e.g., 6) of the plurality of wirings is electrically connected to the bonding pad (1), and an inorganic insulating film (5) is formed between other wirings (e.g., 12) than the predetermined wiring among said plurality of wirings, and the bonding pad. The insulating film (5) is made up of an inorganic insulating film only, so that no organic insulating film is provided between the other wirings (12) and the bonding pad (1). This is advantageous, for example and without limitation, in that the insulating film is less likely to be cracked if or when stress is applied to the bonding pad from above. Moreover, for example and without limitation, since the insulating film is made up of an inorganic insulating

film, the surface of the film may be made smoother and therefore the bonding strength between the bonding pad and the insulating film may be prevented from being reduced when providing a barrier metal on an interface with the insulating film of the bonding pad. As a result, improved bonding between the bonding pad and the insulating film may be realized in certain example embodiments. The cited art fails to disclose or suggest the aforesaid underlined feature of claim 1.

Shimizu (US 2002/0043723) in Fig. 1 requires organic insulating film 10 between bonding pad 14 and other wirings 7b. Note: polyimide film 10 of Shimizu is organic. Thus, Shimizu teaches directly away from the invention of claim 1. Claim 1 expressly excludes the structure of Shimizu because claim 1 states that “no organic insulating film is provided between the other wirings and the bonding pad.” Shimizu fails to disclose or suggest this feature of claim 1, and instead teaches directly away from the same.

Claim 7 requires that “a bottom surface of the bonding pad does not contact any organic insulating film.” Again, Shimizu fails to disclose or suggest this feature of claim 17, and instead teaches directly away from the same. Shimizu requires organic insulating film 10 that contacts the bottom surface of the bonding pad 14, thereby teaching directly away from claim 7. Claim 7 expressly excludes the structure of Shimizu in this respect.

Claim 11, like claim 1, also requires that “no organic insulating film is provided between the other wirings and the bonding pad.” Again, Shimizu fails to disclose or suggest this feature of claim 11, and instead teaches directly away from the same.

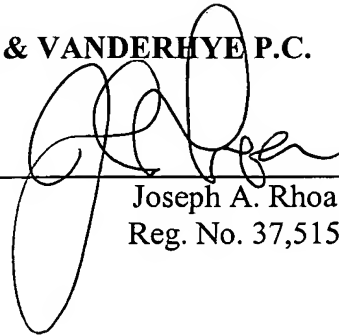
It is respectfully requested that all rejections be withdrawn. All claims are in condition for allowance. If any minor matter remains to be resolved, the Examiner is invited to telephone the undersigned with regard to the same.

SUZUKI, T.
Appl. No. 10/820,058
November 7, 2005

Respectfully submitted,

NIXON & VANDERHIE P.C.

By: _____

A handwritten signature in black ink, appearing to read 'Joseph A. Rhoa', is written over a horizontal line. The signature is stylized with large loops and a long horizontal stroke at the end.

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AMENDMENTS TO THE DRAWINGS

The attached sheets of drawings include changes to Figs. 7-9. These sheets, which include Figs. 7-9, replace the original sheets including Figs. 7-9. In particular, Figs. 7-9 have been labeled “prior art.”

Attachment: Replacement Sheets (3)